Today after years of reading these subatomic tea leaves, physicists feel they are getting closer to answering the question, what we are really made of. Dr Leon M. Lederman Nobel Prize for Physics, 1988 Director Emeritus, FERMILAB USA

Most of the atoms in our body are made of nuclei and electrons. And the nuclei themselves are made of protons and neutrons. And the protons and neutrons are made of quarks. And of course you say what other quarks made of, and that's where we're stuck. For the last 40, 50 years we've been studying the quarks, try to find something inside, and we get the same results we had for the electron. "We get the same results we have for the Electron... THERE IS NOTHING INSIDE!"

There's nothing inside; the quarks don't have any size.

All matter is actually made of energy that has congealed into particular form. So that appears to be what we are made of.

The Mechanics of Rebirth

The Late Ven. Dr. M. Punnaji Maha Thera – The Original Teachings of the Buddha / Page 4

The mechanics of the process of rebirth without a soul was difficult to explain to people during the time of the Buddha. But with the advancement of scientific knowledge today it would not be such a formidable task. Modern people are quite familiar with transference of activity through waves, where no entity as such travels. They are familiar with radio and television transmission through electro-magnetic waves. It should be quite easy for them to understand rebirth as a process of transmission of activity rather than as the transmigration of an entity called soul. It is well known to scientists that the human mind is an activity rather than an entity. So rebirth is merely the transmission of an activity.

We know that a song is but the vibration of the vocal cords of the singer, which sets the air vibrating, which in turn sets the diaphragm in the microphone vibrating, which sets an electric current vibrating along a wire, which again sets an electromagnetic wave vibrating in ether, which in turn vibrates a current in the receiver, which sets the air vibrating, which sets the ear drum of the listener vibrating, which sends a vibrating nerve impulses along the auditory nerve, which begins a vibration in the brain, which produces the sensation of hearing a song. The song was not an entity that passed from one place to another but an activity that was transmitted.

In the same way, a person is not an entity that passes from one life to another, but an activity that is transmitted from one life to another, just like radio or television transmission.

We know, today, that the brain and nervous system functions, electrically. Emotional excitement is electrical too, and it is this emotional energy that motivates action. Motivating emotional energy is what is called "Tanha" (urge) which Sigmund Freud saw as the "libido." It is this "Tanha" which is responsible for rebirth and which provides the energy for transmission. This energy, like electricity, has positive and negative aspects which are manifested in the form of "lobha" (attraction) and "dosa" (repulsion). What is called "Karma" is the excitement *(cetana)* of emotion in the form of "lobha" and "dosa" along with "moha" (delusion).

The more often an emotion is excited, the stronger it becomes and the easier it becomes to repeat. Emotions frequently repeated crystallize into habits and habits continued amalgamate into character. It is character which determines our destiny, both here and hereafter.

Rebirth, therefore, to a Buddhist, is not just a discarnate spirit taking another human or animal body. Every re-existence is a rebirth, to him. Even coming into existence in heaven would be considered a rebirth by the Buddhist, though from a Western religious stand point, it would be the entrance of the soul to Heaven.

There are several realms of existence *(bhava)* in which a being could be born, according to Buddhism. Broadly speaking, they are of three kinds: Sensual Existence *(kama bhava)*, Imagery Existence *(rupa bhava)* and Imageless Existence *(arupa bhava)*.

Sensual realms are again of three kinds; those where there is only the painful sensation, called the Realms of no gain (Niraya); those where there is a mixture of pleasure and pain, which are four in number: Human *(manussa)*, Animals *(tiracchana)*, the Spirits *(peta)*, and Titans *(asura)*. The animals, spirits, titans, and the realms of no gain are together called the four realms of ill-gain *(apayas)*. The third kind of sensual realm is the realm of pleasure only. There are six such worlds called the worlds of angels *(devaloka)*.

The imagery worlds are worlds where extremely subtle forms of matter, or of energy, are present, and where some beings have even radiant bodies. These beings do not experience pleasures but they are happy. They are beaming with happiness, but only inner happiness derived from purity and tranquillity of mind. Pleasure is only a sensation derived from the stimulation of the senses by the environment, while happiness is an undisturbed peaceful and tranquil state of the mind. Youth delight in sensations and excitement, but the mature find satisfaction in tranquillity and peace. This means happiness is more mature. The imageless worlds are free from images whatever, but there is either perception of infinity of space, infinity of cognition, the awareness of complete absence, or the uncertain awareness of neither sensation nor no sensation; the latter being the most refined state of existence.

None of these spheres of existence are permanent, however, though the life span may be very long. Entry into any such form of existence is called a rebirth, and the departure from that state is called death.

Beings travel from life to life, while the ultimate beginning or the ultimate end is normally inconceivable. The direction of travel, however, is determined by "Karma," the emotions *(cetana)* that one lives with. The emotional state at the moment of death is what, determines where a person is reborn.

At death, the emotional energy is released, in the form of a wave, which has a certain frequency and wavelength. This frequency could be high in a person who is highly tensed and emotionally excited. Such high frequency waves are received in the worlds of ill-gain. Relatively low frequency waves are received in the human world and pleasure worlds. Lower levels of frequency are received in the Imagery Realms and even lower in the Imageless Realms. The lowest frequency being received in the Realms of uncertainty where there is neither presence nor absence of sensation.

Very rarely does a being enter these highest refined Realms. The great majority stagnate around the lower realms of pain and suffering. The progress in this tour of the worlds is not a matter of constant evolution, forever ascending the ladder with never a regression. It is rather an up and down, snakes and ladders journey, where there are more snakes than ladders. Just as there are more poor people in the world than the rich, and there are more criminals than saints, there are more beings that are descending the spiritual ladder than there are beings ascending it. An observation of the people we meet in life will make this quite clear. The Buddha once took some sand into his nails and said "Just as there is more sand in the Ganges than in my nails, there are more beings born in the lower spheres than in the higher spheres of existence." So was the opinion of Jesus when he said "narrow is the gate to Heaven and wide is the gate to Hell." But, of course, the re-incarnationists like to think of progression rather than regression:

"In the Orient, the belief in regression of human souls to subhuman levels is prevalent. The Western re-incarnationist asks: is it conceivable that a human being with his remarkable mental power could be 'encased' in an insect or bird?"

"Would not the mere contact cause instant dis¬integration, just as high voltage power shatters a lamp?"

(Re-incarnation in World Thought. Edited by Joseph Head and S.L Cranston – Julian Press. N.Y.)

In any case, the Theravada Buddhist position is that because of this unhappy state of affairs, this continuous tour of beings from life to life, called 'Samsara', directed by Karma, is not a pleasant state of existence. Samsara is not immortality as the re-incarnationists like to think. It is only a continuation of a process of perpetual death. Therefore, the aim of the Buddhist is to bring this "unpleasant tour" (samsara) to an end.

This "tour" can be brought to an end, not by seeking eternal life in an unknown Heaven, but only by freeing the mind of the delusion of existence; by realizing that there is no being or person that does the tour. What continues is not an entity or soul but only a process of activity. When one is free of the delusion of "personal existence or being," the painful struggle for existence and the urge to exist stops, as it has no meaning or benefit in continuing this painful struggle. This brings the suffering here and now, as well as here after, to an end. This is Nirvana, the Summum Bonum of Buddhism. The tour stops because the energy that keeps the tour going, which is in the urge to exist, has now stopped. Suffering is the frustration of the desire to exist permanently in an impermanent world. When one realises that the urge to exist is unrealistic and results only in suffering, because it clashes with the reality of impermanence and death, the urge to exist stops.